

Comments and Division of Water Quality Responses

**Review Draft, Interim Methods for Evaluating Use Support for Great Salt Lake, Utah Pollution Discharge Elimination System (UPDES) Permits.
October 14, 2014**

| # | Topic | Comment | Commenter | Response |
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| 1 | Scope | <p>On Page 1 the Document states: Specifically, these methods apply to discharges to Class 5 Great Salt Lake (Classes 5A, 5B, 5C, 5D, and 5E) (UAC R317-2-6). These methods also apply to discharges to Class 3E when the Class 3E water discharges to Class 5. The appropriateness of this statement is questioned. Because 3E waters are only regulated by narrative standards, it looks as though DWQ could create and enforce “defacto” standards for 3E waters (Waters that, by definition, are already severely habitat limited and hence cannot support typical diverse and sensitive taxa). This issue could be logically ameliorated if the compliance point for the pollutant in question is at the “mouth” of (for example), the Northwest Oil Drain. Further, the Northwest Oil Drain discharges to a short zone that would logically (under current low lake elevations) be characterized as 5E prior to entering 5D (Farmington Bay open water). As Salt Lake City Public Utilities must pass acute WET testing, it can be assumed that there is no reasonable potential for toxicity in the Drain itself. Further, the short distance that the NW Oil Drain travels across sheetflow wetlands creates habitat unique to Class 5E (i.e. shallow, warm, gently-flowing) wetlands.</p> | <p>JRFBWC (Jordan River Farmington Bay Watershed Council)</p> | <p>This guidance document does not create or enforce “defacto” standards for any water including Class 3E. As discussed in the Scope section, the guidance is based on the existing permitting rules in R317-8. DWQ uses acute freshwater criteria for screening effluents to Class 3E waters on the basis that discharges may never be toxic (R317-2-5). UPDES permits were renewed for two dischargers to the Northwest Oil Drain in December, 2014. The discharges were screened using freshwater acute criteria for the Northwest Oil Drain and freshwater chronic criteria for Farmington Bay as suggested by the comment.</p> <p>The same as elsewhere in Utah, permits include both chemical (for instance, water quality-based effluent limits) and if there is reasonable potential for the effluent to contain toxics, and biological limits (WET testing) to ensure the receiving water uses are protected. Discharge permits may include monitoring requirements to support reasonable potential determinations when limits are not required.</p> <p>No changes were made in response to this comment.</p> |
| 2 | Scope | <p>Before offering specific comments on this proposal,</p> | <p>FRIENDS</p> | <p>Thank you for the comment. No changes were made in</p> |

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| | | we reiterate how pleased FRIENDS of Great Salt Lake (FRIENDS) is to see the Division of Water Quality (DWQ) take this approach to Utah Pollution Discharge Elimination System (UPDES) permitting for Great Salt Lake. | (FRIENDS of Great Salt Lake) | response to this comment. |
| 3 | Scope | Chevron supports the statement that this interim approach does not apply to nutrients. | Chevron | No response required. |
| 4 | Scope | In this section of the draft interim approach, DWQ focuses on R317-2-7.2 when referring to the relevant narrative standards that apply to Great Salt Lake. However, it would be more appropriate to focus on R317-2-7, Water Quality Standards, including the Narrative Standards, when discussing protection of Great Salt Lake’s uses. Id. at 1. Alternatively, please clarify if it is your intention that the proposed guidance interprets only the 7.2 standard and not other applicable, “non-numeric” water quality standards. | FRIENDS | This section was clarified. Great Salt Lake is required to comply with all of the provisions in R317-2-7. However, in the absence of applicable numeric criteria (R317-2-7.1) and applicable biological assessment methods (R31-2-7.3), the procedures recommended by the Interim Guidance are based on compliance with the Narrative Standards in R317-2-7.2. The specific context as used in Scope section of the Interim Guidance is with regards to Class 3E waters which the aquatic life by rule is protected by the Narrative Standards only (R317-6-6.3e.). |
| 5 | Process | The document mentions the use of compliance schedules for stipulation of sampling requirements. Compliance schedules indicate a deviation from compliance. Since these are, rather, investigations I believe compliance schedules should be not used. As such the investigations should be either external to the UPDES permit or in a separate investigation section. Central Davis Sewer District prefers the use external agreements, but could agree to a separate section in the permit. | CDSD (Central Davis Sewer District) | DWQ agrees that the term “compliance schedule” may not be appropriate as used in the text. In the Use Support Evaluation section, “compliance schedules” was replaced with “requirements for future data submittals.” In most situations, these investigations are intended to support data gaps in the Use Support Evaluation. DWQ believes that the administrative record for the permit needs to clearly identify the data gaps and how they will be addressed. Should a permit be appealed, the adjudicatory authorities are limited to reviewing the administrative record. Including a description for how and when the data gaps in the permit is anticipated to be most straightforward method of documenting these future efforts for the administrative record. Other methods may be more appropriate in a specific situation which was |

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| | | | | why the word “may” was used instead of “will.” |
| 6 | Process | Secondly, we suggest that UDWQ seek the input of Great Salt Lake resource managers, especially the Utah Division of Natural Resources’ Great Salt Lake Ecosystem Project (GSLEP) to identify and/or concur with the resident species that will be used to support the derivation of numeric criteria. | USFWS (U.S. Fish and Wildlife Service) | DWQ agrees with the comment as evidenced by the Aquatic Life Use workshop hosted by DWQ in April, 2015. Although the goals of the GSLEP and DWQ are complimentary, DWQ anticipates that the USEPA definition of “resident species” is broader than the focus of GSLEP’s efforts in Gilbert Bay. |
| 7 | Process | <p>Performing Risk Assessments requires specialized expertise and is costly. Development of our Pretreatment Program, including the evaluation for local limits, along with the many years of successfully passing acute WET testing should be sufficient validation that the District’s current level of treatment is protecting the environment and protecting the beneficial uses of the Lake.</p> <p>The potential cost of gathering, analyzing, and submitting the data needed to comply with the requirements and processes described in the Document is significant and an unnecessary burden on the residents of our District. Development of our Pretreatment Program, including the evaluation for establishing local limits, along with the many years of successfully passing acute whole effluent toxicity (WET) testing should be sufficient validation that the District’s current level of treatment is protecting the environment and protecting the beneficial uses of Great Salt Lake (Lake).</p> | NDSD (North Davis Sewer District) | <p>Use support evaluations do require specialized expertise and some permittees elect to hire outside expertise but some permittees elect to complete the evaluation using in-house resources. The level of effort is dependent on the specific situation but DWQ works with permittees to appropriately limit the evaluations and avoid unnecessary expenditures. This guidance is intended to help permittees scope and conduct the use support evaluations as efficiently as possible. These evaluations, or some alternative method, are necessary to determine if the permit is required to include water quality-based effluent limits. Pretreatment programs are intended to prevent wastewater treatment plants from exceeding either chemical or biological effluent limits. Local limits are derived based on the effluent limits and performance of the treatment plant. Local limits only provide the level of protection based on the effluent limits, so the effluent limits must be protective of the uses. This guidance provides one method for evaluating use protection.</p> <p>Consistent with the Utah (1991) Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (Biomonitoring), “The control of toxics in wastewater effluent is an important objective of the NPDES program. The integration of biomonitoring requirements with the most stringent of technology-</p> |

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| | | | | <p>based and water quality-based standard-based numeric permit limits is a means to accomplish this objective.” This guidance simply requires that discharge permits to Great Salt Lake meet the same requirements that dischargers to all other waters elsewhere in Utah are already meeting. The permitting rule that is the basis for this guidance allows for the use of “indicators” to control toxicity. To rely on acute WET testing only, a demonstration that the acute WET testing is a sufficient indicator to control for toxics would have to be made to rely on acute WET testing only. The demonstration would need to address for instance, that acute WET testing is protective of chronic effects and that the responses of the acute WET test organisms are protective of the “resident species” in the Great Salt Lake receiving waters. No changes were made in response to this comment.</p> |
| 8 | Process | <p>In general, FRIENDS hopes that the permitting process will remain open and transparent, even as the permittee is working through the interim evaluation process. As the process for evaluating potential impacts for a discharge unfolds, when scientific uncertainty arises DWQ should consider involving the broader scientific community to address that uncertainty. Although it would be difficult to organize on a permit-by-permit basis, DWQ should consider assembling a science panel from various disciplines to address these issues on an as-needed basis.</p> | FRIENDS | <p>See responses to the following 2 comments.</p> |
| 9 | Process | <p>“Pollutant causing effects identified?” (Page 12-13)- - To what extent is the process outlined in this step transparent to resource management agencies and the public? At what point do they get a chance to</p> | USFWS | <p>The public participation requirements are specified in R317-8-6.5 and require a public comment period prior to the Director issuing a permit. The permit is required to include a Fact Sheet or Statement of Basis that</p> |

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| | | review/weigh in on this evaluation & decision? If the opportunity for comment is not until the very end of the process (i.e., notification of a board decision), this makes it very difficult to evaluate and contribute to the discussion leading up to this decision. This is another reason that the Steering Panel/Science Panel approach is recommended—both to ensure that issues and ideas are identified up front, and to ease the implementation of the policy and regulations at the end of the process. | | documents the rationale and bases of the permit. DWQ is obligated to issue or renew permits on a timely basis and including a steering panel/science panel approach as part of the permit issuance process is impractical. |
| 10 | Process | In general, the Service supports the approach that UDWQ is using to address this issue as well as the larger issue of numeric water quality standards for the Great Salt Lake. However, we also recommend that the Division consider the “Steering Panel-Science Panel” approach most recently utilized for the nutrient assessment of the Willard Spur, to address these issues, both for the development of numeric criteria, and also to develop an approach and the appropriate science for the whole effluent toxicity (WET) testing (whether interim or final) discussed in Step 6 of the proposed interim permitting approach. | USFWS | DWQ agrees that stakeholder input is vital to developing and implementing programs to protect water quality. The Steering Panel-Science Panel is one method for achieving this goal but not every issue warrants the expenditure of both DWQ and stakeholder resources. DWQ’s intent was to as quickly as possible to develop a defensible interim method to meet our authority and responsibility for issuing discharge permits that are protective of the uses. DWQ has an established process for vetting water quality standards including numeric criteria. DWQ anticipates using this process when the data become available to derive numeric criteria. All individual UPDES permits include a mandatory public comment period. No changes were made to in response to this comment. |
| 11 | Process | When addressing data gaps during permit renewals, DWQ should require the permittee to fill those gaps as expeditiously as possible rather than allowing a full permit cycle to lapse. Draft Interim Approach at 3. | FRIENDS | DWQ agrees as indicated by the text in the Use Support Evaluation section: “While the permittee should make every effort to complete the analyses prior to the expiration of the existing permit, permits may include requirements for future data submittals, when appropriate, to address data gaps during the upcoming permit cycle. However, the available data and analyses at permit renewal must be sufficient to support that the effluent will not harm the uses of the receiving water.” |

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| | | | | The schedule for this data is uncertain because it is dependent on the specific data needed and the degree of uncertainty that remains regarding protection of uses. Should the data indicate that an immediate change is necessary to protect the uses, the permit would be reopened and modified. In the permits where this approach has been implemented, the inclusion of a schedule in the permit for collecting data ensures that the data is collected and reported expeditiously. No changes were made in response to this comment. |
| 12 | Approach | Page four, first full paragraph, fourth sentence should read: "The final outcome must be that the discharge will not impair the designated and existing uses or lead to a violation of R317-2-7.1." | FRIENDS | Agreed. The sentence was changed to reference R317-2-7 as recommended. |
| 13 | Approach | It appears that the proposed guidance assumes that pollutant loading and the cumulative impact of discharges are not relevant to assessing whether a discharge will threaten designated uses. For example, the guidance states relative to the effluent under consideration that "[w]hen a pollutant concentration is less than the criteria, the concentrations can be concluded to be protective of the use." Id. at 7. Certainly, there are situations where the cumulative effect of several discharges emitting effluent in concentrations less than the Class 3 criteria could impair beneficial uses. Please explain how the proposed guidance will ensure that, cumulatively, discharges will not adversely impact designated uses and will guarantee that loading of pollutants in Great Salt Lake will not impair those uses. | FRIENDS | Pollutant concentrations in an effluent that are below a criterion (or Class 3 criteria as comparison values in these particular cases) can be concluded to be protective of the uses, even in impaired waters. This approach is the same as used for all other waters in Utah. UPDES permit effluent limits are based on concentration because the criteria are reported as a concentration. UPDES permits may include a load limit, typically for bioaccumulative pollutants or includes a de facto load with the flow limit.. If the effluent concentration don't meet the comparison value in the Step 3 of Figure 1 in the guidance, in step 4, additional adjustments for mixing are incorporated. In this step, existing pollutant concentrations in the receiving waters are evaluated to estimate the remaining assimilative capacity. The existing pollutant concentrations reflect inputs from all other sources to the Lake including other permitted discharges. No changes were made in response to this comment. |
| 14 | Approach | Step 3 (Page 6)—"The pollutant effluent | USFWS | See response to preceding comment. |

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| | | <p>concentrations are compared to the receiving water concentrations before mixing.” While I can see that this statement is getting at ruling out pollutants that are present at less than “ambient” concentrations, I have a concern if “ambient” also includes pollutant concentrations (loads) from other sources. Clarify how this step would work in the presence of other pollutant loadings.</p> | | |
| 15 | Editorial | <p>There are several typos in the document, including “UDPES” instead of “UPDES” in the document header and in several other places such as the first sentence in the “Scope” section on page 1. Recommend doing a “search/replace” to edit these.</p> <p>2) There is also a repeated word typo in the Forward section (“This process is intended to document that that...”)</p> <p>Page 4, first paragraph-- Typo: “...additional data is are...”</p> <p>Step 4 (Page 6)- Second to last sentence, edit: “When a pollutant concentration after mixing is less than the criteria...” (add words in bold).</p> | USFWS | These errors were corrected. |
| 16 | Antidegradation | <p>Finally, it is important to note that Utah’s Antidegradation policy states that Level II review is not necessary only where “the proposed concentration-based effluent limit is less than or equal to the ambient concentration in the receiving water during critical conditions.” Utah Admin. Code R317-2-3 3.5.b.1(a). The proposed guidance fails to refer to “critical conditions” or explain how the guidance address how beneficial uses or water quality are maintained during critical conditions.</p> | FRIENDS | A definition for critical conditions from Utah Wasteload Analysis Procedures, Version 1 (DWQ, 2002a) was added to the text. |
| 17 | Antidegra | It is unclear how the proposed guidance relates to | FRIENDS | The Interim Guidance does not address Level II |

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| | dation | required anti-degradation review. After all, antidegradation review is intended to maintain high water quality where it exists. Will DWQ assume that for all pollutants, Great Salt Lake water quality is “better than the established standards?” Moreover, antidegradation review is in part based on a determination of whether “existing uses will be maintained and protected.” Utah Admin. Code R317-2-3.5 (“A Level I review is conducted to insure that existing uses will be maintained and protected.”). Please explain how this determination would be made in light of the proposed guidance. | | <p>antidegradation reviews because these are more appropriately addressed in Utah’s Antidegradation Review Implementation Procedures. Similar situations occur in Utah waters other than Great Salt Lake when no numeric criteria are available for pollutants. In the absence of numeric criteria, precisely identifying the available assimilative capacity is challenging. However, degradation can still be minimized as required by the policy by selecting the least degrading (results in the smallest increases in pollutant concentrations) treatment option.</p> <p>As discussed in the Forward section and Introduction, application of the methods in the Interim Guidance are intended to demonstrate that the uses will be protected. No changes were made in response to this comment.</p> |
| 18 | Screening Values | Derivation of Screening Values (Page 3)—Two comments here. First, it would be helpful to provide more details regarding the “EPA Deletion Process” mentioned here (e.g., in a footnote, or an appendix section). What will be deleted? Why would the “species identified as being residents of the Great Salt Lake suggest that the recalculation procedures will be applied to existing freshwater numeric criteria...”? | USFWS | The EPA deletion process is used to derive site-specific numeric criteria and a reference was provided for more information on the process. Additional detail was not added to the Interim Guidance because it is intended to be applied when no numeric criteria are available. |
| 19 | Screening Values | Page 3 of the document states: The species currently identified as being residents of Great Salt Lake suggest that the recalculation procedures will be applied to existing freshwater numeric criteria that will be supplemented with any available more recent toxicity data. Comment: DWQ needs to reveal the taxa list and locations where collected in supporting this | JRFBWC | Since the Interim Guidance was drafted, DWQ convened an aquatic life use workshop in March 2015 for Great Salt Lake to identify and compile the available information. The outcome will be summarized in a white paper that will be publically available. Changes to water quality standards such as criteria derivation include several opportunities for public involvement. The changes are discussed with the Water Quality Standards Workgroup, |

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| | | statement. | | presented to the Board, and subject to public comment per Utah Administrative Procedures. No changes were made in response to this comment. |
| 20 | Screening Values | <p>The use of surrogate numeric criteria, though, does allow methods similar to those promoted by EPA in the Technical Support Documents for Water Quality-Based Toxics Control . Using existing Utah Class 3 water quality criteria for aquatic life as surrogate criteria is a logical choice. Although some may argue that using these criteria is not appropriate because they don't represent aquatic life in the Great Salt Lake, you point out that these criteria are likely to be overprotective, not underprotective. You also give dischargers an opportunity to recalculate the criteria based on the species that are actually present, if they don't test out using Class 3 criteria. This is just one example of the flexibility the approach provides. We agree that failure to screen out at any particular level does not imply that water quality standards will not be protected; rather, it means further investigation is required. A discharger can start fairly simply, and if he or she doesn't screen out, he or she can use progressively more rigorous scientific methods (even though they may demand more resources) to demonstrate no reasonable potential. This seems logical, scientifically sound, and fair to all parties.</p> | Chevron | DWQ agrees with the comment. No changes were made in response to this comment. |
| 21 | Screening Values | <p>First, the cited rule also provides that (where there is reasonable potential) appropriate effluent limits can be established for an indicator parameter (UAC R317-8-4.2(4)(a)6.c.). As such, DWQ should further clarify that the rule as cited is incomplete (and that the rule itself recognizes an alternative approach to</p> | RTKC (Rio Tinto Kennecott Copper) | <p>As noted in the Scope section "While protection of the uses and compliance with the Narrative Standards are regulatory requirements, the specific methods described herein are guidelines but are not requirements. Alternative methods or interpretations are acceptable provided that a demonstration can be made that the</p> |

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| | | effluent limitation development where necessary). | | aquatic life uses are protected.” The text was revised to note that the rule includes an indicator parameter option for which no guidance is available. |
| 22 | Screening Values | Second, since the criteria development (and corresponding permit requirements) would be predicated on a finding of "reasonable potential," it is important that any such finding be well documented, supported by science and not unduly conservative. It follows that DWQ's derivation of screening values is critical to ensuring that any development of water quality criteria be necessary for protecting the beneficial uses of the lake as opposed to triggering additional, unsupported requirements for the regulated community. | RTKC | <p>DWQ agrees that:</p> <ul style="list-style-type: none"> • Reasonable potential findings be well documented, supported by science and not unduly conservative. This information will be documented in the UPDES permit Fact Sheet and Statement of Basis. • The development of numeric criteria is necessary to ensure the beneficial uses of the Lake are protected (see Core Component 1: Developing Aquatic Life Criteria for Priority Pollutants A Great Salt Lake Water Quality Strategy (DWQ, 2014)), and • Unsupported requirements should not be imposed on the regulated community. <p>No changes were made in response to this comment.</p> |
| 23 | Screening Values | As noted in prior RTKC comments, the referenced freshwater standards (and the Environmental Protection Agency's (EPA) marine standards) are not relevant to hypersaline systems like the Great Salt Lake. EPA has long recognized these facts and clarified that the freshwater criteria could not be directly applied to the Great Salt Lake. See EPA's 1985 Guidelines for Deriving Numerical National Water Quality Criteria for the Protection Of Aquatic Organisms and Their Uses, Stephen et al. at 2 (recognizing the breadth of applicability of the criteria but also specifying that a few water bodies may be too atypical to use those criteria such as the Great Salt Lake). Since the criteria themselves are not relevant to the lake (and were not developed | RTKC | The use of freshwater criteria for screening is not a requirement and as noted in the introduction of the Interim Guidance: “Alternative methods or interpretations are acceptable provided that a demonstration can be made that the aquatic life uses are protected.” Nor does the Interim Guidance directly apply freshwater criteria to Great Salt Lake. The Interim Guidance does recommend using freshwater criteria to determine if water quality-based effluent limits may be necessary in a UPDES permit to protect the uses. Great Salt Lake is mentioned once in the 1985 Guidelines where EPA opines that the methods are appropriate for unique waters such as Great Salt Lake. “In addition, with appropriate modifications these National Guidelines can be used to derive criteria for any specific geographical |

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| | | based on the lake's aquatic uses), use of those criteria for screening discharges to the lake (and evaluating reasonable potential) is similarly inappropriate. | | area, body of water (such as the Great Salt Lake), or group of similar bodies of water, if adequate information is available concerning the effects of the material of concern on appropriate species and their uses." (EPA, 1985) No changes were made in response to this comment. |
| 24 | Screening Values | RTKC recognizes that DWQ identifies the freshwater screening levels as conservative and that the constituents warranting follow-up can be further narrowed by site-specific evaluation (described in the draft guidance). The suggested supplemental constituent review is, however, not well documented. For example, step five of the screening approach identifies the potential use of a biotic ligand model for copper and zinc. The suggestion would, however, have uncertain benefits since there is no established method for supporting the associated biotic ligand modeling for discharges to the lake. Similarly, step six of the screening approach suggests other possible site-specific steps but recognizes the short-comings of the approach. Specifically, the Interim Approach provides "[a]ny remaining pollutants that do not meet the screening benchmarks should be evaluated using methods that demonstrate that the uses will not be impaired by the pollutant. No specific guidance is available for how to conduct these evaluations." Interim Approach at 7. If DWQ is going to recommend the ultra-conservative freshwater screening criteria, there must be more foundation for specifically assessing the constituents that remain after utilizing those criteria. The existing draft guidance falls short. | RTKC | As discussed in the Scope section of the Interim Guidance, the methods recommended are not mandatory and alternative scientifically defensible may be applied to demonstrate protection of the uses. DWQ acknowledges that specific guidance on conducting the supplemental reviews is lacking but we anticipate that a much smaller number of pollutants of potential concern will remain (if any) at Steps 5 and 6 than at Step 1. This is anticipated to reduce the level of effort necessary to document that the effluent will not harm the uses. The pollutants remaining after Step 4 will need to be addressed on a case-by-case basis based on the information available at the time. As DWQ and others fill the data gaps, more refined analyses can be conducted in Steps 5 and 6. No supporting analyses were provided for the comments assertion that the freshwater criteria are ultra-conservative for Great Salt Lake so we are unable to respond. The text was revised to not that the biotic ligand models (BLM) are not applicable to saline waters. |
| 25 | Screening | RTKC continues to maintain that the planned brine | RTKC | DWQ agrees that future data such as toxicity testing |

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| | Values | shrimp and brine fly bioassay testing will trigger data collection that will answer questions regarding toxicity threshold information. The information will, of course, be directly relevant to the selection of screening levels. In the meantime, other information (including ongoing results from Whole Effluent Toxicity (WET) testing of discharges) can further demonstrate that the beneficial uses of the lake are being protected. RTKC requests that DWQ further clarify the problems with applying fresh water aquatic criteria to the lake and specify examples of the alternative approaches, e.g., the review of WET testing of discharges (which can be supplemented with the information being obtained from the planned lake studies, when available), that are appropriate to supplant reliance on screening effluent against fresh water criteria. | | results for brine shrimp and ultimately, numeric criteria will be useful for refining the process for evaluating if permitted discharges could adversely affect the Great Salt Lake's uses. However, this information is currently unavailable. Interim Step 6 already discusses specific applications of WET testing as does the section on Interim Whole Effluent Toxicity (WET) Testing section: "If chronic WET testing is conducted, the chronic results are interpreted as an <u>indicator</u> . That is, if no effects are observed, then no effects are predicted for Great Salt Lake organisms. |
| 26 | Screening Values | In addition to the threshold approach to screening levels, RTKC generally concurs with DWQ's stated assertions relevant to the appropriate values that should be screened. Specifically, DWQ maintains that, as part of screening and for quantifying discharge pollutant concentrations (for evaluating maximum estimated concentrations in the effluent), "previous permit limits may be appropriate estimates of the maximum pollutant concentrations if supported by monitoring data." Interim Approach at 4. Along those lines, RTKC believes that the maximum pollutant concentrations established as permit limits (whether or not supported by monitoring data) should be assessed against the referenced real data relevant to the lake, e.g., the toxicity testing data associated with the brine | RTKC | The section on comparing the maximum effluent concentration to the screening values was updated to reference DWQ's Reasonable Potential Guidance for specific procedures. DWQ agrees that data specific to brine shrimp and brine flies are more reliable for Gilbert Bay than screening values from other aquatic systems. However, data are only available for brine shrimp for a limited number of pollutants (As, Cd, Cu, Se, and Zn), even less are data are available for brine flies. Brine shrimp and brine flies are not expected in the Transitional Waters of Gilbert Bay but based on the results from the Delta Monitoring in the Transitional Waters performed by the Jordan Valley Water Conservancy District (UPDES # UT0025836), invertebrates in this area of the Transitional Waters are halo-tolerant species found also in fresh water. The freshwater screening values are |

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| | | shrimp and brine fly bioassay testing. ³ Some of those data may already exist. | | recommended until the more specific data are available. The phrase "if supported by monitoring data." was deleted because the permit limits are typically higher than the actual effluent concentrations. |
| 27 | Screening Values | We do not agree with the statements and assumptions made in the last paragraph of page 3 which state, "The available toxicity data for brine shrimp and limited data for brine flies suggest that these species are relatively tolerant of metals. Therefore, freshwater criteria are broadly appropriate as screening values for discharges to Great Salt Lake." There is not sufficient data available to deduce the conclusion made for applying freshwater criteria. The ecosystem of the Lake is unique and the application of freshwater criteria is not appropriate or scientifically justified. | NDSO | The higher salinity portions of the Lake are unique. However, the available toxicity data for the organisms inhabiting these waters (e.g., brine flies and brine shrimp) support that freshwater criteria are likely to be protective and are therefore appropriate as screening values. Additional references were added to support these statements. For Great Salt Lake waters that are too fresh for brine shrimp, the aquatic inhabitants are a subset of what would normally be found in Utah freshwater. The text was revised to better explain the rationale for freshwater criteria as screening values. |
| 28 | Screening Values | Page 3, third paragraph—"The available toxicity data for brine shrimp and limited data for brine flies suggest that these species are relatively tolerant of metals." After reviewing the cited reference (DWQ, 2013; see document for citation), this sentence should be changed to "There is very limited toxicity data available for brine shrimp and brine flies, but there is some indication that these species may be relatively tolerant of metals." | USFWS | Additional references were added that support the statement and higher tolerance to organic pollutants was added as supported by the references. |
| 29 | Screening Values | In the Interim Approach, the DWQ stated that "freshwater criteria are broadly appropriate as screening values for discharges to the Great Salt Lake." The City agrees with this broad assumption of freshwater criteria as screening values and applauds the DWQ for compiling a species list of resident species for the Great Salt Lake that may ultimately be used in support of derivation of specific Great | SLCC | DWQ appreciates Salt Lake City Corporation's assistance with protecting the water quality of the Lake. |

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| | | Salt Lake science-base numeric criteria. The City recently (2013) completed a screening' evaluation of the effluent from the Salt Lake City Water Reclamation Facility with comparison to Class 3 criteria and will continue to work with the DWQ during our upcoming permit cycle to further characterize our receiving water. | | |
| 30 | Screening Values | While we agree that freshwater criteria are generally appropriate as screening values for discharges into Great Salt Lake, that statement does not account for situations where there is bioaccumulation within birds, or the situation where standards for saline waters are more stringent than freshwater criteria. Draft Interim Approach at 3. Please clarify. | FRIENDS | The Interim Guidance is consistent with the comment regarding the sensitivity of birds as shown by the statement in the Interim Guidance: "An exception would be if avian species are more sensitive to a pollutant than the aquatic biota such as was the case with selenium and likely will be the case for pollutants that biomagnify, such as methylmercury." DWQ agrees that freshwater criteria would not be protective for pollutants in saline waters where toxicity data indicate that these organisms (e.g., brine shrimp) are more sensitive. However, based on the toxicity data available for a limited number of pollutants, these organisms are less sensitive. Additional references were added and this section was revised for clarity. |
| 31 | Screening Values | Also, please clarify what you mean by the statement: "If pollutant concentrations are less than or equal to the indicators, adverse effects to Great Salt Lake biota are unlikely..." Id. at 4. | FRIENDS | The text was revised to use the term "screening values" for "indicator values" instead of using them interchangeably in this portion of the Interim Guidance. An explanation of Screening Values was also added as a first paragraph to the Screening Values section. |
| 32 | Mixing Zone | Similarly, the proposed guidance states: "By definition, pollutant concentrations less than ambient do not degrade water quality." Id. at 6. As an initial matter, it is important to note that the goal of the proposed guidance is to protect beneficial uses. To be applicable to the guidance, this statement would have to read: "By definition, pollutant concentrations less than ambient will not | FRIENDS | As assessed in the 2014 Utah Integrated Report, the data are insufficient to determine if Great Salt Lake's water quality is supporting the beneficial uses with the exception of selenium concentrations which are concluded to be supporting the uses. If the concentrations of a pollutant are concluded to not support the uses in the future, i.e., impairment, then this screening value would not apply. The text was revised. |

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| | | <p>impair beneficial uses.” Has there been a determination that all Great Salt Lake beneficial uses are being met? If so, please explain how such a conclusion could be reached without reference to water quality standards or lake-wide analysis. Plainly, if background concentrations are not protecting beneficial uses, the discharge of effluent of the same concentration as background would not, by definition, be deemed as protective of beneficial uses.</p> | | |
| 33 | Mixing Zone | <p>Mixing Zones (page 14), third paragraph—What is the definition of a “critical dry period” as used in the second-to-last sentence of this paragraph? Does this account for periods of extended (e.g., multi-year) drought? This would also be a concern for transitional waters that would normally have standing water even during critical dry periods, where extended drought could result in even these wetlands having standing water. Would mixing zones which would normally be allowed in these areas not be allowed during this kind of drought condition?</p> | USFWS | <p>The critical conditions are based on the most recent 5 years of data which is the best available predictor for the next 5 years. This was modified for Great Salt Lake from the procedures used for other Utah lakes and reservoirs which is based on the ordinary high-water mark. Current EPA Region 8 and DWQ policy is not to permit mixing zones in wetlands (see USEPA, 1995 in the Interim Guidance). No changes were made in response to this comment.</p> |
| 34 | Mixing Zone | <p>Visual Plumes (VP) (page 16)—While it is noted that the model used for this analysis is only available on the Windows XP platform, it should also be noted that Microsoft quit supporting the XP platform in April 2014. Maybe there should be a footnote that mentions this model should not be used unless it is updated to a more current platform.</p> | USFWS | <p>The text was revised to note that Windows XP is no longer supported.</p> |
| 35 | Mixing Zone | <p>The Interim Assessment cites to EPA's guidance document recognizing that a mixing zone is "where an effluent discharge undergoes initial dilution. . . ." Interim Assessment at 14 (emphasis added). Of</p> | RTKC | <p>The reference to UAC R317-2-5 was added.</p> |

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| | | course, that concept is codified in rules implementing Utah's Water Quality Act (cited later in the document). Utah Admin. R317-2-5. | | |
| 36 | Mixing Zone | Mixing Zones. The Interim Assessment would clarify that (1) mixing zones are not allowed for discharges to "fringe wetlands within the Class 5E Transitional Waters of Great Salt Lake (based on the notion that there will be no standing water during critical dry periods) and (2) mixing zones are allowed within the Transitional Waters where there is standing water even during critical dry periods (subject to the requirements, e.g., distance limits) for mixing zones in lakes and reservoirs). DWQ suggests that for any purposes of mixing zone evaluation, the lake begins at the average lake elevation over the past five years. RTKC recognizes the tremendous variability in lake levels (and the corresponding changes over time with respect to high water marks); mixing zones should not, however, vary with the lake levels. Instead, RTKC recommends that the mixing analysis for the lake begin where the discharge meets the wet water, i.e., that point where dilution is in progress. ⁸ Any discharges that flow across the transitional zones to meet wet water can be assessed on a site-specific basis and subject to appropriate monitoring and other relevant requirements. | RTKC | As discussed in the Interim Guidance, DWQ and USEPA Region 8 policies are that mixing zones are not appropriate for wetlands. If dilution water is available in the Class 5E Transitional Waters and is not a wetland, a mixing zone derived consistent with UAC R317-2-5 is permissible. The Interim Guidance is consistent with the other issues raised by the comment and no changes were made. |
| 37 | Mixing Zone | On a related issue, RTKC maintains that any modeling for evaluating mixing zones should be assessed on a case-by-case basis taking into account the unique mixing dynamics of the lake (including the distinct questions associated with when mixing occurs in the lake). | RTKC | The Interim Guidance is consistent with the comment and no changes were made. |

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| 38 | Mixing Zone | Because of the unique nature of the Great Salt Lake (e.g., as stated in the Interim Approach large variance in lake level, shallow depth, more buoyant fresh water influent, wind shear, and water current) the City agrees that analysis of mixing zones requires more sophisticated mixing zone models. The City agrees that the Great Salt Lake requires additional investigation and study prior to implementation of final numeric criteria. The City will continue to support the DWQ in their efforts to establish science-based criteria for the Great Salt Lake. | SLCC | DWQ appreciates Salt Lake City Corporation's support and efforts to ensure protection of Great Salt Lake's water quality. The Interim Guidance is consistent with the comment and no changes were made. |
| 39 | Temperature | Page 6 (Step 2), first paragraph—"...should not change the receiving water temperatures by more than 4° C (Class 3B requirements)." Is this value based on research? While this may be a regulatory condition, it may or may not be appropriate to the GSL ecosystem. UDWQ should consult with experts (e.g., Gary Belovsky or others working with the GSLEP) to determine if this is appropriate. | USFWS | This temperature section of the Interim Guidance was deleted because the data were determined to be inadequate to support a recommendation at this time. |
| 40 | Temperature | DWQ also indicates that while there are no temperature criteria relative to the lake, "effluent should not change the receiving water temperature by more than 4 degrees C (citing the Class 3B fresh water criteria)". While RTKC recognizes that DWQ allows for exceptions to this recommendation, any reference to a temperature standard (where one has not been promulgated for the receiving waters) is inappropriate. | RTKC | This temperature section of the Interim Guidance was deleted because the data were determined to be inadequate to support a recommendation at this time. |
| 41 | Temperature | The requirement on page 6 discusses a temperature rise limitation of 4-degrees C. There does not appear to be a basis for this increase especially in a shallow ecosystem. More justification for this | CDS | This temperature section of the Interim Guidance was deleted because the data were determined to be inadequate to support a recommendation at this time. |

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| | | should be provided or the requirement removed. | | |
| 42 | WET | <p>“Great Salt Lake aquatic life uses protected?”, second paragraph (page 13)—The statement “Standard WET testing organisms may be more sensitive than the aquatic life community in the Great Salt Lake.” should be backed up with a citation at a minimum, and a discussion preferably. This is the primary issue involved in whether or not “no effects observed” is an indicator of no effects anticipated to GSL aquatic life community (see comments 10 and 12, above).</p> | USFWS | <p>The text was revised to include the examples of differences in sensitivities between the organisms or dissolved salts in the effluent being tested. The word “may” is appropriate because the following sentence requires the data to support that the WET test organisms are more sensitive. The uncertainty is reiterated in the WET Testing section of the Interim Guidance: “Using test organisms that are not representative of the biota in the receiving waters introduces the potential for errors when interpreting the WET test results. These errors could result in decisions that are either under- or overprotective of the receiving waters.” No changes were made in response to this comment.</p> |
| 43 | WET | <p>WET Testing. DWQ also uses the Interim Approach to document its guidance on WET testing specific to Great Salt Lake discharges, i.e., follow-up to the March 2014 discussion draft. DWQ asserts such a policy is needed pending its determination of what WET test species are appropriate to represent the Great Salt Lake ecosystem. Consistent with RTKC's comments on the WET testing discussion, RTKC continues to maintain that freshwater species are not appropriate for conducting WET testing on discharges to the Great Salt Lake.</p> | RTKC | <p>The interim guidance was revised by the addition of “and receiving water” and a matrix was added to clarify the recommendations which are consistent with the comment: “Base the decision for selecting the test organism(s) (freshwater or ocean species) on effluent and receiving water characteristics. The use of EPA-approved test organisms is still required. The 1991 Utah WET Implementation Guidance requires the use of EPA-approved organisms but does not discuss the potential use of marine organisms.” The WET test organisms are not required to be freshwater and if the specific Great Salt Lake receiving water is too salty for a freshwater organisms and the effluent is too salty for a freshwater WET test organism, a marine WET test organism should be attempted.</p> |
| 44 | WET | <p>As DWQ is aware, RTKC has been conducting acute WET testing on sheepshead minnows for years. RTKC proposed the alternative test organism (which was approved by EPA) to account for the hardness</p> | RTKC | <p>Table 1 was added to provide additional recommendations on test species selection that includes using marine organisms when the effluent and receiving waters are unlikely to support freshwater organisms.</p> |

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| | | in its effluent. In other words, there is already a track record of using effluent-specific species more relevant to the lake when evaluating discharges to the lake; those same issues need to be considered in the context of any revised WET testing requirements. Indeed, sheepshead minnows may be the logical "interim" WET test species pending authorization of any other, more specific WET test organism. | | |
| 45 | WET | RTKC also recognizes that DWQ wants to implement chronic WET testing based on the assessment of receiving water dilution; DWQ asserts that chronic WET testing may be implemented if the receiving water dilution is less than 20:1. RTKC did not specifically object to the changes as reviewed last March provided certain clarifications are incorporated into the WET test approach. While some of RTKC's suggestions have been included in the Interim Approach, additional clarity is needed. | RTKC | See responses to the specific issues identified. |
| 46 | WET | DWQ states that results of any required chronic WET testing will be interpreted as an "indicator". ⁶ RTKC believes that DWQ should specify (in light of the potential difficulties in interpreting the results in the context of Great Salt Lake organisms), that any chronic WET testing cannot be used as a basis for any enforcement action or for the assessment or reasonable potential determination. Instead, if the chronic WET test fails the endpoints of survival, growth and reproduction, the permittee has the prescribed options for additional evaluation in order to provide the follow-up beneficial use protection assessment that would be required by DWQ. | RTKC | The text of the recommended permit language includes "As indicators, the chronic WET test results alone are not used for determining reasonable potential for toxicity or noncompliance with the permit." A footnote was added to the Self-Monitoring and Reporting Requirements: "TUC is calculated by dividing the receiving water effluent concentration determined in accordance with R317-2-5 by the chronic test IC25. The TUC is an indicator and an exceedance is not used for determining compliance." |
| 47 | WET | RTKC supports the concept that permittees can | RTKC | The reduction can be approved by the Director without a |

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| | | request a reduction in frequency of WET testing after a certain number of tests with no toxicity (a permit modification that occurs without public notice)? | | public comment period. While this is the recommended permit language, individual permits may deviate based on site-specific conditions or public comments. |
| 48 | WET | DWQ also states that "[t]he specific procedures for [WET] testing will be incorporated into upcoming revisions to Utah's (statewide) 1991 WET Guidance." Interim Assessment at ii. RTKC anticipates that those changes will also be noticed for public comment. | RTKC | The statewide WET guidance will be public noticed for comment. |
| 49 | WET | RTKC does, however, have a foundation for objecting to chronic WET testing. EPA took the position (in December of 2000) that the sporadic nature of RTKC's discharge from the tailings impoundment (relative to a different outfall) indicated that chronic WET testing was not warranted. Those same conditions hold true today relative to the nature of the discharges from Outfall 012. | RTKC | The Great Salt Lake WET guidance was modified to be consistent with Utah's WET policy that the determination of acute versus chronic WET testing using dilution can be modified based on site-specific conditions and by documenting the rationale in the permit Statement of Basis. For intermittent discharges the justification may be for instance, that the permit limiting the discharge in such a way that chronic exposures in the receiving water are unlikely and therefore, chronic effects are unlikely. |
| 50 | WET | RTKC agrees with DWQ's conclusion that "an absence of effects during chronic WET testing are presumed to be protective of the Great Salt Lake biota and demonstrate compliance with the Narrative Standards." Interim Assessment at 10. | RTKC | No response required. |
| 51 | WET | RTKC also believes the specific number of tests triggering a request for reduced frequency should not be uniform but should be assessed on a permit-by-permit basis. | RTKC | A request for a reduction in WET test frequency is available at any time via a permit modification. The recommended permit language for the number of tests is intended to provide general guidance and the specific conditions under which a public notice is not warranted. The flexibility to modify the requirements for individual permits based on site-specific conditions remains. No changes were made in response to this comment. |
| 52 | WET | Historically, chronic WET tests for some POTWs have resulted in occasional false positives (i.e. | JRFBWC | False positives using the EPA WET testing protocols were evaluated in 2001 by EPA |

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| | | <p>immediate retests most often passes and examples where the TIE/TRA procedures are followed has very seldom resulted in identifying a pollutant that consistently occurs in the discharge at potentially toxic concentrations). This has resulted in inconclusive and costly WET testing and priority pollutant analysis. This “cat chasing its tail” may go on for years and could cost 10s to 100s of thousands of dollars. Hence, the notion that chronic WET testing will be able to identify toxicants or define effluent limits that provide clear or expected results is optimistic at best. Secondly, these suspect results will be exacerbated by the use of receiving water as dilution water. As further explained below, salinity was the driver in defining the four main subclasses of Class 5. Consequently, dilution water may range from 5X the salinity of the ocean (hence marine species are not appropriate), to perhaps 0.2X the salinity of the ocean (Willard Spur and the south part of Farmington Bay). Moreover, even these regions of Bear River and Farmington Bays can experience 5X ocean salinity (South Arm salinity) under normal lake elevations. The point is: and as mentioned in the strategy document, dilutions with receiving water will likely be incompatible with test organisms or will not represent actual lake conditions or salinity ranges for which they are intended. There appears to be too many complicating factors when trying to perform representative chronic testing for GSL species and ecosystems. In lieu of</p> | | <p>(http://water.epa.gov/scitech/methods/cwa/wet/upload/2007_08_06_methods_wet_finalwetv1.pdf). This evaluation indicated an acceptable error rate for WET testing. In the absence of specific examples, we are unable to address the concern of “inconclusive and costly WET testing and priority pollutant analysis.”</p> <p>Table 1 was added to provide additional guidance on selecting freshwater or marine test organisms. As noted in the Interim Guidance under step 6 for Figure 1, “For most discharges to Great Salt Lake, measuring water effect ratios may be impractical because of the lack of dilution water (effluent dependent) or salinity of the receiving water.” However, this option should be preserved for situations where the approach is viable.</p> <p>As noted in the EPA 1993 <i>Technical Support Document for Water Quality-based Toxics Control</i>, “...biological criteria can supplement existing chemical-specific criteria and provide an alternative to chemical-specific criteria where such criteria cannot be established.” As noted by the comment, a more thorough assessment of species assemblages and ecosystem processes that occur among the various salinity ranges is needed to implement this methodology. Some of this work is ongoing by DWQ and others. However, to date no methodology has been developed that is rigorous enough to be applied in a regulatory context. The interim guidance/approach can be modified in the future if a methodology is developed. WET testing is a currently available tool recommended for integratively evaluating and controlling toxics. As noted in the</p> |

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| | | trying to perform chronic WET testing, a more thorough assessment of species assemblages and ecosystem processes that occur among the various salinity ranges is suggested to be the necessary first step developing criteria for the various subclasses. This will also establish the appropriate taxa lists for the various subclasses under the various salinity regimes and seasons. These more complete lists can then be used in the recalculation procedures where appropriate or for the identification of candidate species for future toxicity testing. | | interim guidance, uncertainty remains regarding the representativeness of the standard WET test organisms for Great Salt Lake discharges. DWQ will continue to work to resolve this question. The 2015 Aquatic Life Use workshop (held after the comment period on the interim guidance) is an example of these efforts. |
| 53 | WET | WET testing is a vital component of the water quality standards implementation through the NPDES permitting process and supports meeting the goals of the Clean Water Act to "maintain the chemical, physical and biological integrity of the nation's waters. " WET testing assesses the aggregate toxic effect of a discharge. WET tests replicate the total effect and actual environmental exposure of aquatic life to toxic pollutants in an effluent without requiring the identification of the specific pollutants. The proposed guidance does not appear to require WET testing in order to establish that the aggregate effect of a discharge will not impair beneficial uses. Please explain how you can ensure that the aggregate effect of a discharge will not impair beneficial uses without requiring WET testing in all instances. | FRIENDS | The basis for requiring WET testing for Great Salt Lake discharges will follow the same procedures as are applied for discharges to other waters in Utah. WET testing is required when a discharge has reasonable potential to discharge toxics. We concur that all discharges with reasonable potential to discharge toxics be required to conduct WET testing. Requiring WET testing for discharges without reasonable potential to discharge toxics is unnecessary and is costly. No changes were made in response to this comment. |
| 54 | WET | Appendix A: Recommended UPDES Permit Text— because of issues discussed above, it seems that the | USFWS | DWQ and others are actively working on characterizing the existing taxa inhabiting Great Salt Lake. The data |

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| | | question of what are appropriate GSL-specific test organisms (or surrogates) for WET testing for GSL discharges should be resolved. In the absence of that decision, the certainty of the permit conditions to protect GSL designated uses is difficult to determine. | | collected at the 2015 Aquatic Life Use Workshop (held after the comment period closed on the Interim Guidance) is the first step in identifying the existing taxa. Data gaps were identified that will be the focus of future research efforts. The approach described in the Interim Guidance may be modified if sufficient data are available to support more definitive interpretations of the WET testing. No changes were made in response to this comment. |
| 55 | WET | Step 6 (Page 7)- This step gets at the heart of this guidance, which is WET testing for pollutants that have not been screened out by the previous steps. It seems that the difficulties with WET testing will be the same as the difficulties that already exist for developing numeric criteria, namely the lack of GSL-relevant data. It appears that the logic here is that existing (though potentially not relevant) data will be used to support WET testing while numeric criteria are being developed. If this is the case the approach should be more clearly spelled out, and the benefits and risks of the approach discussed. One question I have is whether it would be possible to screen the pollutants that are currently permitted under existing UPDES permits for discharges to the Great Salt Lake to determine what pollutants would make it to Step 6, in order to determine the number and type of pollutants that might need to be addressed through this proposed approach. It may be that some of these “survivors” might be important enough (e.g., in terms of frequency in discharges, potential toxicity to GSL organisms and impacts to beneficial uses, etc.) to be added to the priority list for the development of numeric criteria | USFWS | The screening recommended by the comment is conducted on a permit-by-permit basis. While the specific pollutants remaining after the screening comparisons to fresh water criteria vary based on the specific discharge, the numbers of pollutants remaining are typically less than 3. Along with other factors such as the magnitude of the exceedance above the screening values will be considered in future prioritizations of pollutants for toxicity testing and/or criteria development. No changes were made in response to this comment. |

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| 56 | WET | <p>Interim Whole Effluent Toxicity (WET) Testing (page 8)—First, introductory paragraph below heading. This paragraphs states that “An interim policy is needed until DWQ makes a determination regarding what WET test species are appropriate to represent the Great Salt Lake ecosystem.”, however, there is no discussion of the process or timing for UDWQ to make that determination. How long is it likely that these interim measures will be in place? How will WET test species and methods be developed?</p> <p>Second bullet, WET Testing (page 8)—As an example of this concern, it appears that EPA will need to be involved to approve an appropriate test species for the GSL because neither freshwater or marine organisms may be appropriate (or the results of the test may be difficult to interpret for GSL waters). Does DWQ have the ability to select an interim GSL-specific test organism?</p> | USFWS | <p>The test organism should have a similar tolerance to salinity as present in the receiving waters. For most receiving waters in the U.S., fresh water EPA-approved WET test organisms are used for fresh receiving waters and marine EPA-approved WET test organisms are used for marine receiving waters. DWQ is compiling a database of the Lake’s resident taxa and their salinity tolerances to support the evaluation of potential WET test organisms.</p> <p>Toxicological sensitivity is also a factor because the specific species tested may be the most sensitive based on existing WET test data for an effluent.</p> <p>Two potential regulatory paths are available. EPA would have to either approve an alternative test procedure (ATP) or a new WET test method. Predicting the timing of these determinations is difficult because they also are dependent on the availability of resources. Text was added describing the first step, characterization of the aquatic ecosystem. .</p> |
| 57 | WET | <p>Third bullet, WET testing (page 8)—Apart from concerns regarding the selection of WET test organisms, we agree with the approach (stated several times in the document) of using results from this interim method as “indicators,” in that “...if effects are observed, further investigation is necessary to interpret the results in the context of Great Salt Lake organisms.” However, unless there is reasonable certainty that the organisms being tested will respond similarly to GSL organisms, and that they are more sensitive to the pollutant at issue than GSL organisms, it may not be sufficiently conservative to judge that “if no effects are</p> | USFWS | <p>Only test organisms approved by EPA for WET testing can be used for UPDES permitting. DWQ concurs that definitive data is not available to demonstrate that the toxicological sensitivity of the EPA-approved WET test organisms are representative of Great Salt Lake organisms. The “Derivation of Screening Values” section was clarified to support the conclusion that based on the available data, the standard EPA test organisms are anticipated to have toxicological sensitivities that are protective of the Great Salt Lake. As part of the Water Quality Strategy, DWQ will continue to work on establishing appropriate Great Salt Lake-specific WET test organisms. The determination of whether a discharge is</p> |

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| | | observed, then no effects are predicted for Great Salt Lake organisms. This is the primary reason that it seems there should be more consideration of, and stakeholder/scientific input to the WET test approach, and also to the consideration of which pollutants might cause a discharger to have to implement WET testing (such that potentially those pollutants should be added to the list 11) Page 10, Third Paragraph—There are the same concerns here regarding the interpretation of an “absence of effects” condition as expressed in comment 10, above. It seems at a minimum that UDWQ must demonstrate that the test organisms used for a GSL WET test are at least, if not more, sensitive to the pollutant(s) being tested than GSL organisms in order for this approach to be protective. | | potentially toxic is based on the same approach used for all Utah discharges and is not specific to Great Salt Lake and is therefore, beyond the scope of the Interim Permitting Guidance. |
| 58 | WET | Whole Effluent Toxic Control Program Figure 1 (page 9)—This flow chart should have “yes” and “no” (left and right, respectively) on the lines coming from the box in the right-hand column labeled “No chronic toxicity for twelve consecutive months (5)”of pollutants subject to GSL organism toxicity testing). | USFWS | The comment appears to apply to Figure 2 Figure from 1991 Utah WET Implementation Guidance. This figure will be superseded by Utah’s revised WET Implementation Guidance that is anticipated to be released for public comment in 2016. |
| 59 | WET | Chronic WET testing may be used for investigation but acute WET testing should still be used in the compliance monitoring section of the permit. While this may be more costly if chronic testing is used for investigation, Central Davis Sewer District believes it is more appropriate. | CDSD | DWQ agrees and this is reflected in the approach where acute testing is implemented for compliance and chronic testing is interpreted as an indicator. |
| 60 | WET | Consideration in the interim method should be given for reasonable potential when requiring the use of chronic criteria for investigation. A facility with a low or no reasonable potential are more likely to be impacted by false positives rather than | CDSD | DWQ agrees and the interim approach has been revised to be consistent with the statewide approach currently under revision that requires WET testing only when a discharge has reasonable potential to discharge toxics. |

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| | | actual toxicity. | | |
| 61 | WET | Page 12 discusses toxic units. Reference is made to use of a TU of 1.0. Consideration should be given to a TU for a maximum daily limit of 1.6. This is discussed in EPA's 2004 Guidance for WET testing in Appendix B. | CDSD | DWQ concurs with the EPA (2004) recommendation and has revised the recommendation of a $TU_c=1$ to $TU_c=1.6$ when evaluating the results of chronic WET testing for Class 5 Great Salt Lake. |
| 62 | WET | Central Davis Sewer District can basically agree to and comply with the most or all of the requirements in the draft document as long as they are applied uniformly to all dischargers and not waived for less than significant differences. | CDSD | DWQ agrees with the recommendation. No changes were made in response to this comment. |
| 63 | WET | Among other things, the Guidance recommends the use of whole effluent toxicity ("WET") testing of the permitted effluent discharges to Great Salt Lake. Based on prior meetings and discussions with Division of Water Quality ("DWQ") personnel, it is the understanding of Compass that the requirement to perform WET testing under the Guidance will not be imposed on Compass by DWQ for the reason that Compass' effluent is saline. The saline effluent would kill any species used in the WET test regardless of any toxins present in the water. | Compass Minerals | The decision to require WET testing for any discharge is based on the reasonable potential for the discharge to contain toxics. The return of only the minerals derived from the Lake back to the Lake does not constitute reasonable potential to contain toxic pollutants in the context of WET testing. |
| 64 | WET | The statement in the last sentence of the second paragraph on page 7 which states that, "... ocean WET test organisms may be a viable alternative for situations where dilution water is available" is not scientifically justified. | NDSD | As discussed in the interim guidance, uncertainties remain regarding the representativeness of both fresh and marine water EPA-approved WET organisms for protecting Lake organisms. One of the goals of the Great Salt Lake Water Quality Strategy is to evaluate these questions. Application of a water effects ratio is consistent with both State and federal requirements but technical challenges relating to the WET test organisms relative to the salinities of discharge and receiving water remain. Until these challenges are comprehensively resolved for the Lake, DWQ supports retaining the option |

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| | | | | for a permittee to evaluate the water effects ratio on a site-specific basis. No changes were made in response to this comment. |
| 65 | WET | The Document states that chronic WET testing results are to be interpreted as indicators on page 8. The District's position is that chronic WET testing should be used for monitoring purposes only and not a limit that could cause a permit violation. Is this the intent of the statement on page 8? In support of our position that chronic WET testing be for monitoring purposes only, its inclusion in the Self-Monitoring and Reporting Requirements table on page A-2 should be clarified with a footnote stating that it is not a permit limit and cannot be construed to cause a violation of permit conditions or requirements. | NDSD | Agreed. A footnote was added that "For discharges to Class 5 Great Salt Lake, the TU _c is not a compliance limit." |
| 66 | WET | "Until the chronic VVET test organisms are concluded to represent the Great Salt Lake biota, the chronic VVET testing endpoints of survival, growth, and reproduction are not considered an absolute determinant of the potential toxicity of the effluent for the Great Salt Lake but are instead interpreted as indicators. " and "Using test organisms that are not representative of the biota in the receiving waters introduces the potential for errors when interpreting the WET test results. These errors could result in decisions that are either under- or overprotective of the receiving waters." The City does not agree with broad implementation of Chronic WET testing prior to the development of a DWQ list of specific Great Salt Lake chronic and acute WET test organisms. However, the City looks forward to the DWQ developing the list of specific | SLCC (Salt Lake City Corporation) | DWQ looks forward to continue to work with Salt Lake City and other dischargers collaboratively in understanding the Lake to help ensure that the Lake continues to provide important recreational, ecological, and economic benefits for current and future generations. |

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| | | Great Salt Lake chronic and acute WET test organisms and will assist, as possible, in the development of the list. Should chronic WET Testing be implemented, the City agrees with the DWQ approach of using the results as indicators and that the testing is to be used as a screening tool and not for determining reasonable potential for toxicity or non-compliance with the permit. | | |